

REMARKS

Claims 19, 25, 26 and 35 are cancelled. Therefore, claims 1, 4-7, 10, 13-15, 17-18, 22, 31 and 33-34 are pending. Claims 1, 6, 7, and 22 are amended to more clearly require administration of a molecule which specifically binds Ang-2 coupled to another agent. Support for this amendment is found throughout the specification, including page 20, lines 16-22. This amendment does not add matter. The Examiner is respectfully requested to enter them into the case as the amendment is believed to place the claims in position for allowance and/or to reduce the issues on appeal.

I. Rejections under 35 USC § 102(e).

Claims 1-9 and 11-34 were rejected as anticipated by Li et al. (U.S. 6,006,620). This rejection is respectfully traversed. The following remarks are offered to clarify the applicant's position that this rejection is inappropriate.

1. Li et al. do not teach targeting of Ang-2. Amended claims 1, 6, 7 and 22 require the use of a molecule which specifically binds Ang-2. Li et al. do not disclose or suggest such a molecule. Moreover, Li et al. could not have suggested the use of such a molecule because it was not until the present invention was made that it was realized that Ang-2 is an early marker of tumor vasculature development (instant specification, page 18, line 11 to page 19, line 6).

2. Li et al. require the use of externally-delivered energy to target a desired tissue. The method of Li et al. use externally energy delivered to a target site which makes the target site temporarily more accessible to the movement of exogenous compounds, increasing bioavailability of that compound (US 6,006,123, col. 4, lines 1-22). Li et al. distinguish their method on the basis that the exogenous compound can be administered after the energy pulse is delivered ('123 patent, col. 4, lines 23-29). In direct contrast to the teaching of Li et al., the instant invention uses the Ang-2 binding molecule to target the tumor vasculature rather than externally-delivered energy. Therefore, the targeting mechanism is entirely different between the two methods.

3. Li et al. use targeted energy to increase bioavailability of the exogenous compound. As described at col. 4, lines 1-22 of the '123 patent, the purpose of the Li et al. method is to increase bioavailability of the exogenous compound. In direct contrast, the instant invention is not attempting to increase bioavailability at all. The effectiveness of the Ang-2-binding molecule is due entirely to the fact that it binds Ang-2, and is not related in any way to methods of increasing bioavailability.

4. Li et al. use image guidance to focus the energy deposition to the desired target tissue. As described at col. 4, lines 58-64, Li et al. use image guidance to focus the energy

deposition to the desired target tissue. In contrast, the instant invention uses the binding to Ang-2 of the Ang-2-binding molecule to deliver an imaging agent to a tumor target (when imaging is desired) or to deliver a chemotherapeutic agent to a tumor target (when cell death is desired). Further in contrast to Li et al., as noted in claim 1, the instant invention provides information requisite for targeting, whereas Li et al. require knowledge of tumor location prior to targeting.

5. Li et al. require knowledge of the location of the desired target tissue prior to targeting. Li et al. require knowledge of where to apply the externally-delivered energy such that the bioavailability of the exogenous compound can be specifically increased at that location. In contrast, the instant invention is based on the realization that Ang-2 is highly expressed in the vasculature of tumors, including early stage tumors, thus useful for selectively delivering chemotherapeutic agents to the tumor site, while at the same time minimizing non-specific accumulations of chemotherapeutic agents at non-tumor sites (Specification, page 19, lines 8-17).

Analysis under 35 USC § 102. Under the analysis required to establish anticipation, applicants respectfully submit that Li et al. does not anticipate the instant claims for several reasons outlined above, include the fact that Li et al do not disclose or suggest the use of a molecule which specifically binds Ang-2, and Li et al. do not teach the use an Ang-2-specific molecule to target an imaging or chemotherapeutic agent to tumor vasculature. In light of the above remarks, it is believed that this rejection should be withdrawn.

II. Rejections under 35 USC § 103(a).

Claim 10 was rejected as obvious over Li et al. and further in view of Klaveness et al. (U.S. 6,261,537). This rejection is respectfully traversed on the grounds that claim 10 is dependent on claim 1 which is specifically drawn to a method of imaging tumor vasculature which requires use of a molecule which specifically binds Ang-2. Accordingly, the above remarks in response to the §102 rejection are fully applicable here and are herein specifically incorporated by reference in response to the §103 rejection. In light of the above remarks, it is believed that this rejection should be withdrawn.

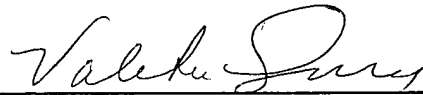
Conclusion

It is believed that this document is fully responsive to the rejections raised in the Office action dated 9 March 2006. In light of the above amendments and remarks, it is believed that the claims are now in condition for allowance, and such action is respectfully urged.

Fees

The fee for filing of an RCE now due is \$790. In addition, since the Final Rejection was issued 9 August 2006, a one-month extension of time fee for \$120 is required for the filing of this RCE to extend the response date to 9 December 2006. According, the Commissioner is hereby authorized to charge Deposit Account Number 18-0650 in the amount of \$910, or any additional fees that may be determined to be due.

Respectfully submitted



Valeta Gregg, Ph.D., Reg. No. 35,127
Regeneron Pharmaceuticals, Inc.
777 Old Saw Mill River Road
Tarrytown, New York 10591
(914) 593-1077 (direct)